

Amendments to the Claims:

- 1 1. (original) A method for automatically generating a network replication topology for
2 use by a directory service in replicating a directory, comprising the computer-
3 implemented steps of:
4 reading a plurality of router configuration files; and
5 generating the network replication topology representing one or more sites and one or
6 more site links based on information in the plurality of router configuration
7 files.
- 1 2. (original) The method of claim 1, wherein the information in the plurality of router
2 configuration files includes router interface information and the step of generating the
3 network topology is performed based on the router interface information.
- 1 3. (currently amended) The method of claim 2, wherein the step of generating the
2 network topology comprises:
3 determining at least one site by identifying a sub-network on a Local Area Network
4 (LAN) interface; and
5 generating a site reference for each site.
- 1 4. (currently amended) The method of claim 2, wherein the step of generating the
2 network topology comprises:
3 determining at least one site link by identifying a Wide Area Network (WAN)
4 interface; and
5 generating a site link reference for each site link.

1 5. (currently amended) The method of claim 1, wherein the step of generating the
2 network topology comprises:

3 determining at least one site by identifying a router interface with a bandwidth
4 exceeding a predefined threshold value; and

5 generating a site reference for each site.

1 6. (currently amended) The method of claim 1, wherein the step of generating the
2 network topology comprises:

3 determining at least one site link by identifying a router interface with a bandwidth
4 not exceeding a predefined threshold value; and

5 generating a site link reference for each site link.

1 7. (currently amended) The method of claim 1, wherein the step of generating the
2 network topology comprises:

3 determining at least one site link by identifying a router interface with a packet round-
4 trip-time exceeding a predefined threshold value; and

5 generating a site link reference for each site link.

1 8. (original) The method of claim 1, further comprising a computer-implemented step of:
2 reading preprocessing information, the preprocessing information including override
3 information for nullifying the information associated with a same one or more
4 sites or site links from the plurality of router configuration files, wherein the
5 network topology is generated based additionally on the override information.

- 1 9. (original) The method of claim 1, wherein the step of reading a plurality of router
2 configuration files includes reading from a network management system.
- 1 10. (original) The method of claim 1, wherein the step of reading a plurality of router
2 configuration files includes reading from a router query result.
- 1 11. (original) The method of claim 1, further comprising the computer-implemented steps
2 of:
3 storing the replication topology in a database; and
4 copying the replication topology from the database to the directory service.
- 1 12. (original) The method of claim 11, wherein the directory service is Active Directory
2 and the one or more site links is an Active Directory site link.
- 1 13. (original) The method of claim 11, wherein the directory service is Active Directory
2 and the one or more sites is an Active Directory site.
- 1 14. (original) A computer-readable medium carrying one or more sequences of
2 instructions for automatically generating a network topology for a directory service,
3 wherein execution of the one or more sequences of instructions by one or more
4 processors causes the one or more processors to perform steps of:
5 reading router interface information from a plurality of router configuration files;
6 generating the network topology representing one or more network sites and one or
7 more network site links based on the router interface information.

- 1 15. (original) The computer-readable medium of claim 14 wherein execution of the one or
2 more sequences of instructions by one or more processors causes the one or more
3 processors to perform the step of generating the network topology by causing the one
4 or more processors to perform a step of:
5 generating at least one site reference by identifying a sub-network on a Local Area
6 Network (LAN) interface.

- 1 16. (original) The computer-readable medium of claim 14 wherein execution of the one or
2 more sequences of instructions by one or more processors causes the one or more
3 processors to perform the step of generating the network topology by causing the one
4 or more processors to perform steps of:
5 generating at least one site link reference by identifying a Wide Area Network (WAN)
6 interface.

- 1 17. (original) The computer-readable medium of claim 14 wherein execution of the one or
2 more sequences of instructions by one or more processors causes the one or more
3 processors to perform the steps of:
4 storing the replication topology in a database; and
5 copying the replication topology from the database to the directory service.

- 1 18. (original) The computer-readable medium of claim 14, wherein the directory service is
2 Active Directory and the one or more site links is an Active Directory site link.

- 1 19. (original) The computer-readable medium of claim 14, wherein the directory service is
2 Active Directory and the one or more sites is an Active Directory site.

- 1 20. (currently amended) A computer system that ~~can~~ automatically generates a network
2 replication topology for use by a directory service in replicating a directory, the
3 system comprising:
4 a network interface; and
5 one or more processors connected to the network interface, the one or more
6 processors configured for
7 reading router interface information from a plurality of router configuration files;
8 generating a network topology representing one or more network sites and one or
9 more network site links based on the router interface information.
- 1 21. (original) The computer system of claim 20 wherein the network topology is
2 generated for use with a directory service and the one or more processors are further
3 configured for generating the network topology by generating one or more network
4 site references by identifying a sub-network on a Local Area Network (LAN)
5 interface.
- 1 22. (original) The computer system of claim 20 wherein the network topology is
2 generated for use with a directory service and the one or more processors are further
3 configured for generating the network topology by generating one or more site link
4 references by identifying a Wide Area Network (WAN) interface.
- 1 23. (original) The computer system of claim 20 wherein the network topology is
2 generated for use with a directory service and the one or more processors are further
3 configured for:

- 4 storing the replication topology in a database; and
- 5 copying the replication topology from the database to the directory service.
- 1 24. (currently amended) An apparatus that ~~can~~ automatically generates a network
- 2 topology for use in replicating a directory associated with a directory service, the
- 3 apparatus comprising:
- 4 means for reading a plurality of router configuration files; and
- 5 means for generating the network topology representing one or more sites and one or
- 6 more site links based on information in the plurality of router configuration
- 7 files.
- 1 25. (original) The apparatus of claim 24, further comprising:
- 2 means for determining at least one site by identifying a sub-network on a Local Area
- 3 Network (LAN) interface.
- 1 26. (original) The apparatus of claim 24, further comprising:
- 2 means for determining at least one site link by identifying a Wide Area Network
- 3 (WAN) interface.
- 1 27. (original) The apparatus of claim 24, further comprising:
- 2 means for storing the replication topology in a database; and
- 3 means for copying the replication topology from the database to the directory service.
- 1 28. (new) The method of Claim 1, further comprising:
- 2 reading a list of one or more router names from a source, wherein the source is a
- 3 network management system, a database, or a router query result;

4 generating a router name from the router configuration file associated with each of the
5 one or more routers;
6 comparing the one or more router names from the router configuration files to the list
7 of one or more router names from the source, and
8 upon a router name from the router configuration files not being in the list of one or
9 more router names from the source, generating an exception.

1 29. (new) The method of claim 28, further comprising:
2 generating a temporary site name for each router name from the router configuration
3 file associated with each of the one or more routers; and
4 associating each of the one or more site references determined from the router
5 configuration file associated with each of the one or more routers with the
6 temporary site name for the associated router.

1 30. (new) The method of claim 29, further comprising:
2 generating a partial site link for each of the one or more site link references
3 determined from the router configuration file associated with each of the one
4 or more routers; and
5 associating each partial site link with the temporary site name for the associated
6 router.

1 31. (new) The method of claim 30, further comprising:
2 generating a sub-network reference based on each of one or more “ip route”
3 commands in the router configuration file associated with each of the one or
4 more routers; and

5 associating each sub-network reference with the temporary site name for the
6 associated router.

1 32. (new) The computer-readable medium of Claim 14, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 reading preprocessing information, the preprocessing information including override
4 information for nullifying information associated with one or more sites or
5 one or more site links from one or more router configuration files;
6 wherein generating the network topology is based additionally on the override
7 information.

1 33. (new) The computer-readable medium of claim 32, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 reading a list of one or more router names from a source, wherein the source is a
4 network management system, a database, or a router query result;
5 generating a router name from the router configuration file associated with each of the
6 one or more routers;
7 comparing the one or more router names from the router configuration files to the list
8 of one or more router names from the source, and
9 upon a router name from the router configuration files not being in the list of one or
10 more router names from the source, generating an exception.

1 34. (new) The computer-readable medium of claim 33, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:

3 generating a temporary site name for each router name from the router configuration
4 file associated with each of the one or more routers; and
5 associating each of the one or more site references determined from the router
6 configuration file associated with each of the one or more routers with the
7 temporary site name for the associated router.

1 35. (new) The computer-readable medium of claim 34, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 generating a partial site link for each of the one or more site link references
4 determined from the router configuration file associated with each of the one
5 or more routers; and
6 associating each partial site link with the temporary site name for the associated
7 router.

1 36. (new) The computer-readable medium of claim 35, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 generating a sub-network reference based on each of one or more “ip route”
4 commands in the router configuration file associated with each of the one or
5 more routers; and
6 associating each sub-network reference with the temporary site name for the
7 associated router.

1 37. (new) The computer system of Claim 20, wherein the one or more processors are
2 further configured for:

3 reading preprocessing information, the preprocessing information including override
4 information for nullifying information associated with one or more sites or
5 one or more site links from one or more router configuration files; and
6 wherein generating the network topology is based additionally on the override
7 information.

1 38. (new) The apparatus of Claim 20, further comprising:
2 means for reading preprocessing information, the preprocessing information including
3 override information for nullifying information associated with one or more sites
4 or one or more site links from one or more router configuration files; and
5 wherein the means for generating the network topology comprises means for generating
6 the network topology based additionally on the override information.